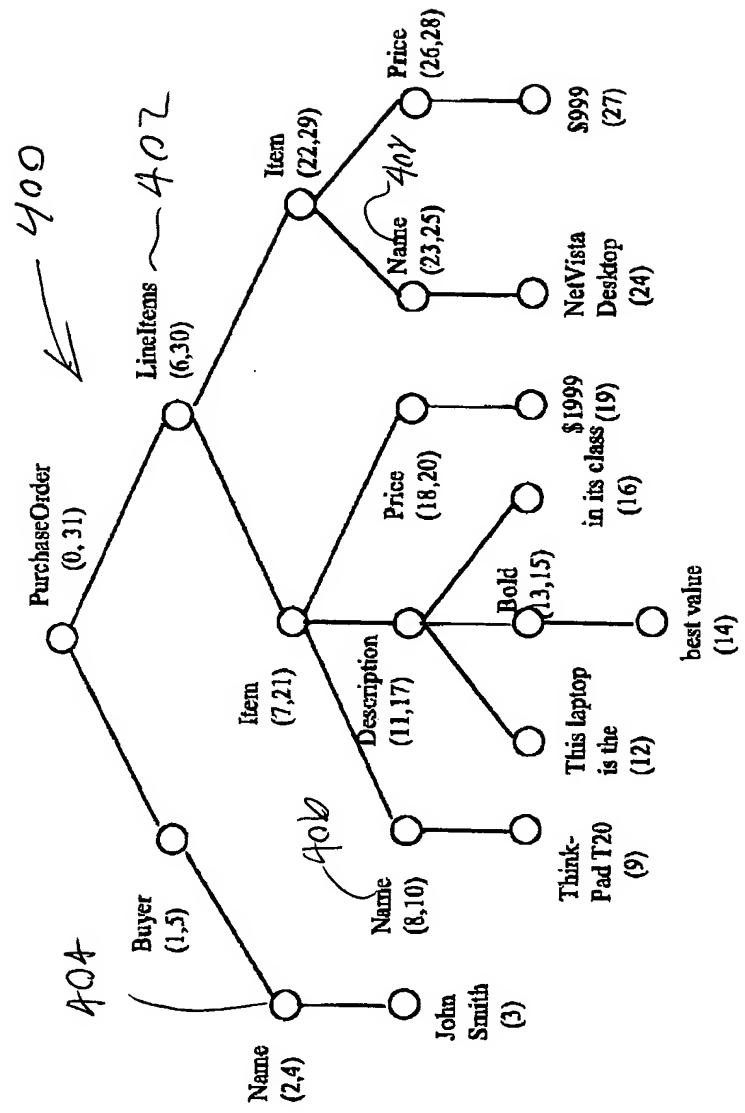
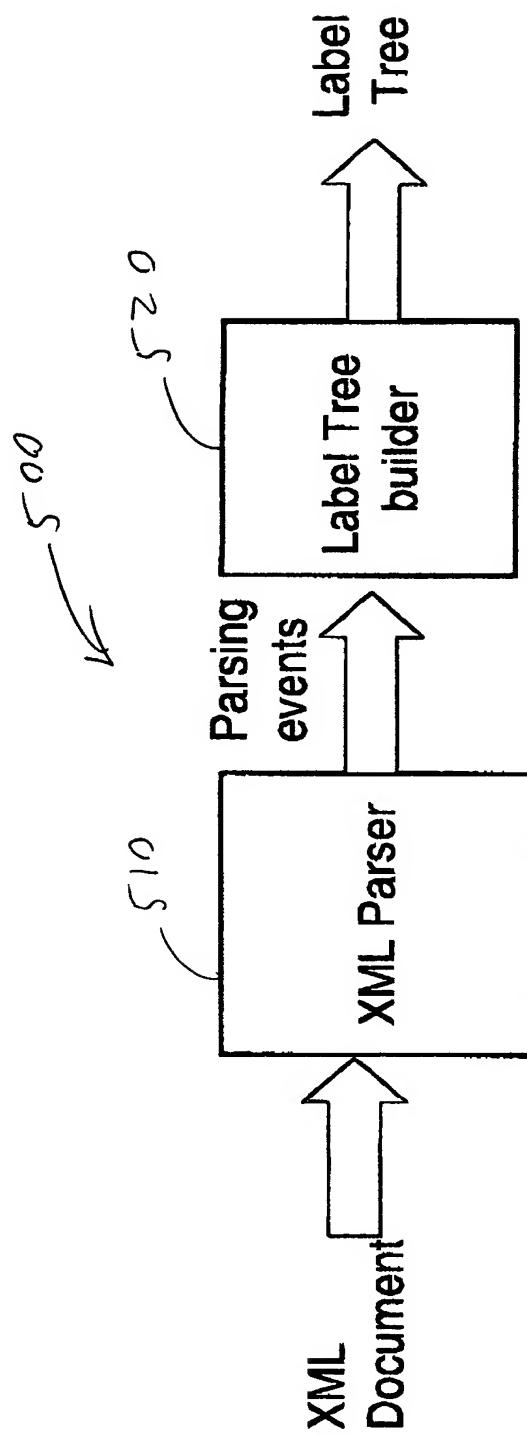


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<PurchaseOrder>
  <Buyer>
    <Name>John Smith</Name>
  </Buyer>
  <LineItems>
    <Item>
      <Name>ThinkPad T20</Name>
      <Description>
        This laptop is the <Bold>best value</Bold> in its class
      </Description>
      <:Price>$1999</Price>
    </Item>
    <Item>
      <Name>NetVista Desktop</Name>
      <:Price>$999</Price>
    </Item>
  </LineItems>
</PurchaseOrder>
```

Figure 3

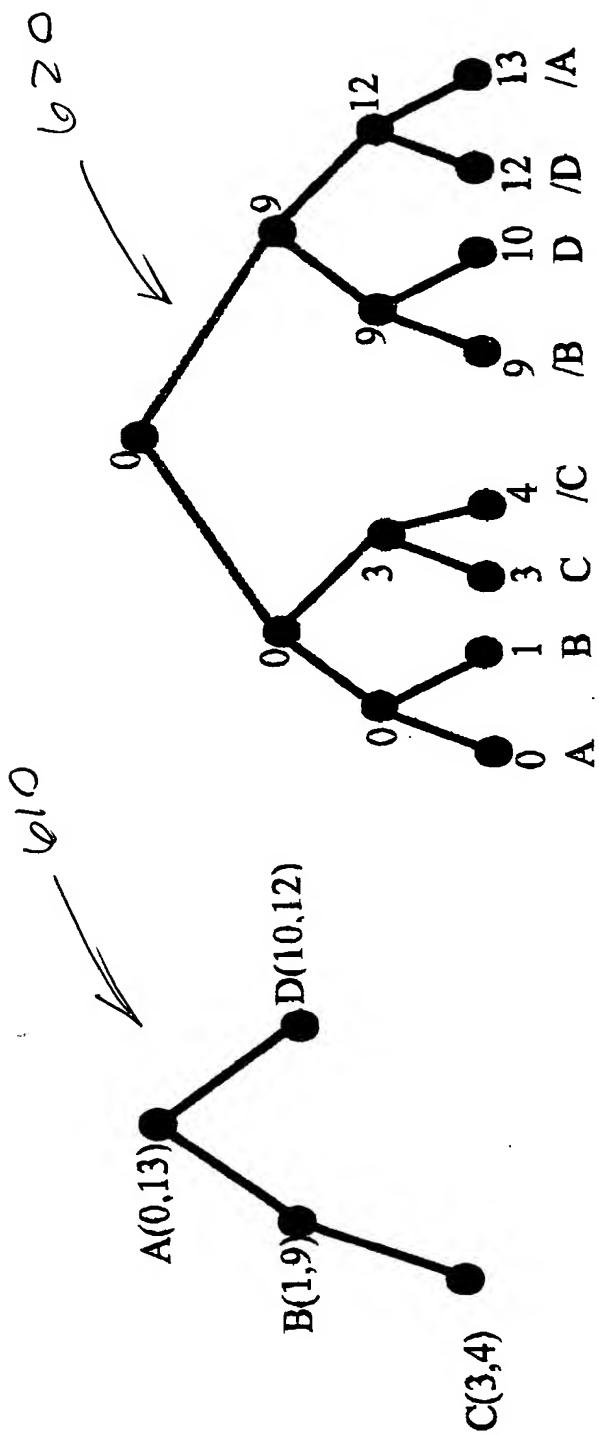


416, 4



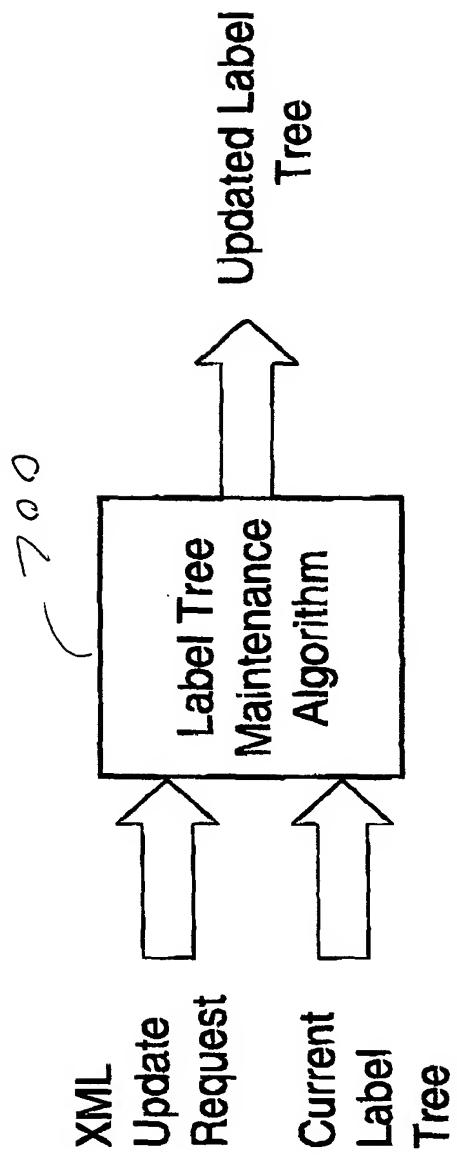
Building the label tree in bulk-loading mode

Fig. 5



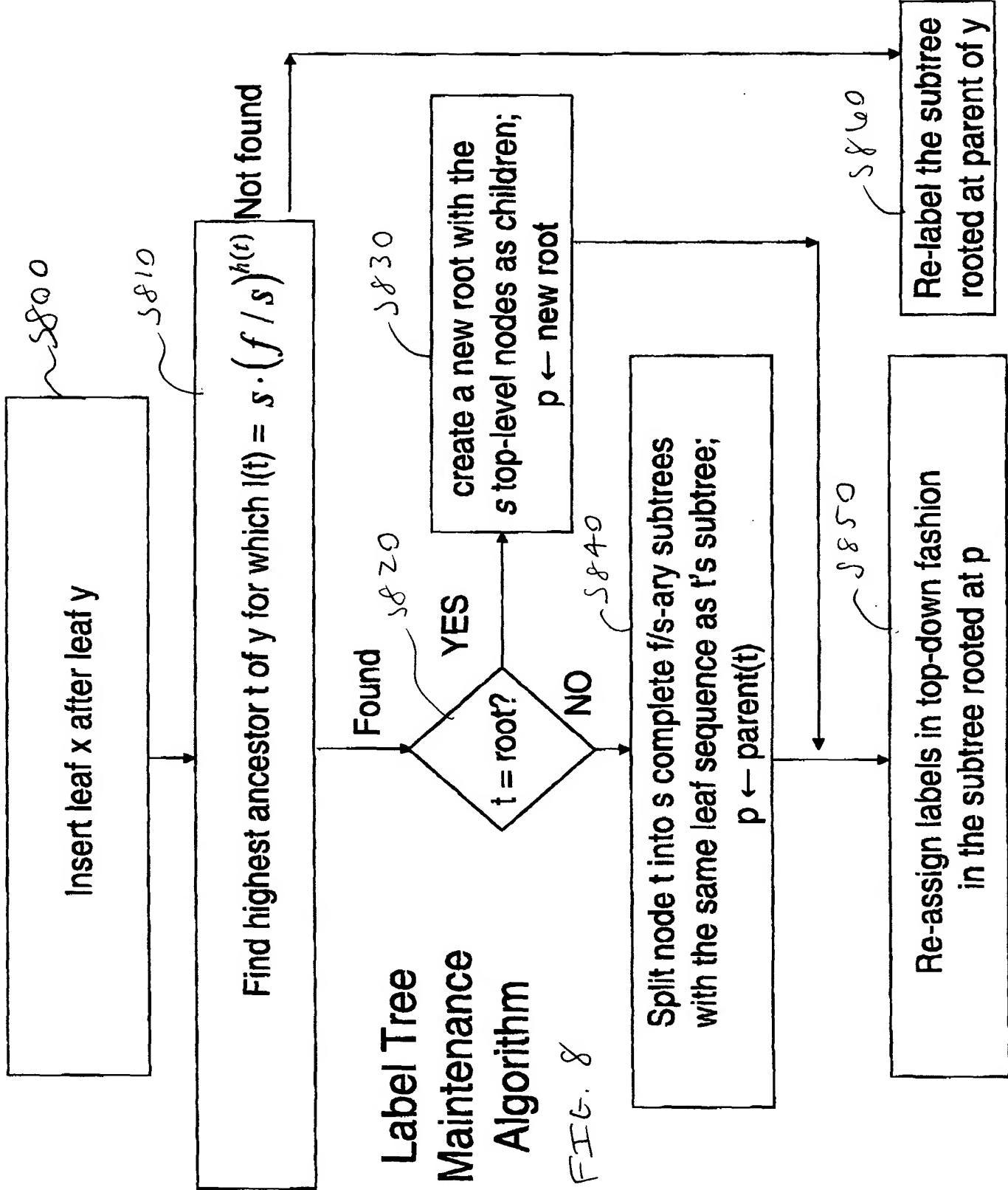
#16. 6B

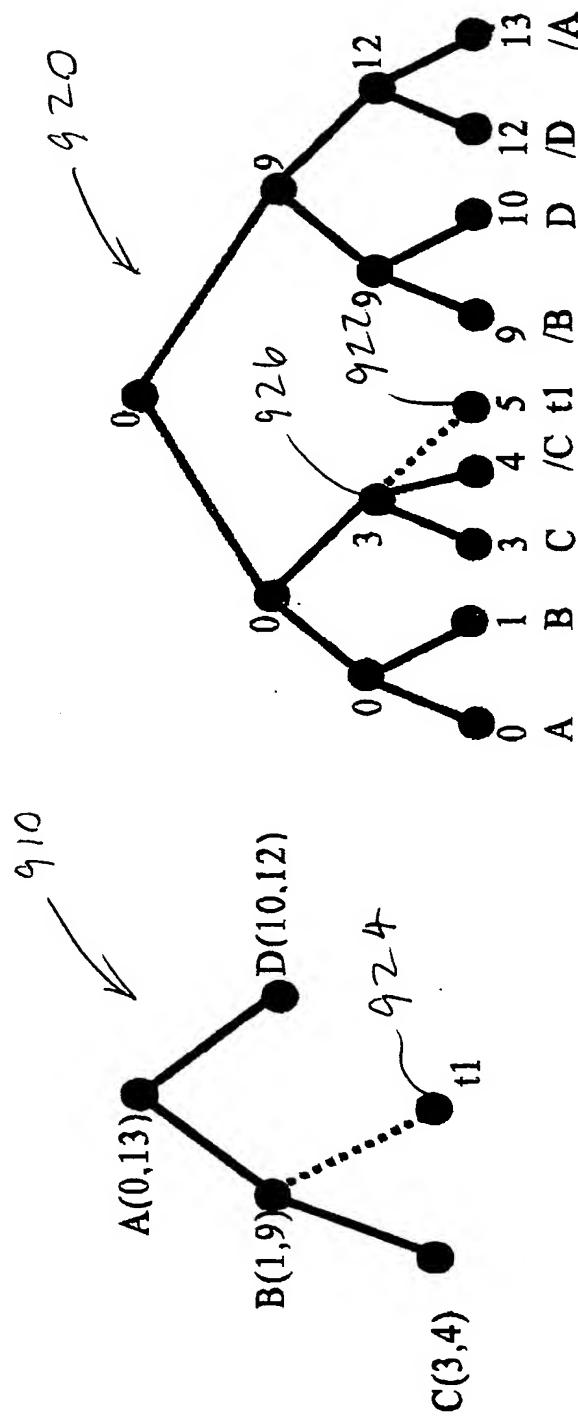
#16. 6A



Maintaining the label tree in response to updates

F16-7





Label tree ($f=4, s=2$)

XML tree

$f16\ gA$

$f16\ gB$

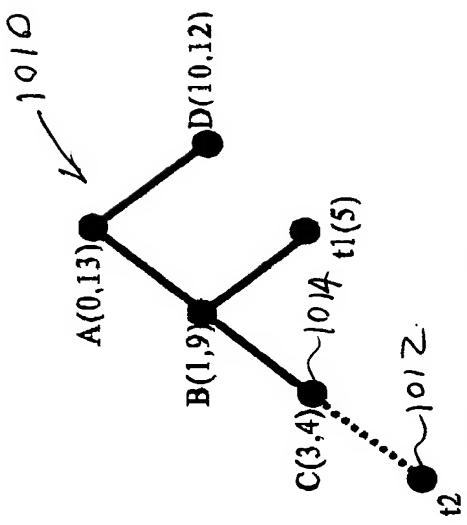


FIG. 10 A
XML tree (before insertion)

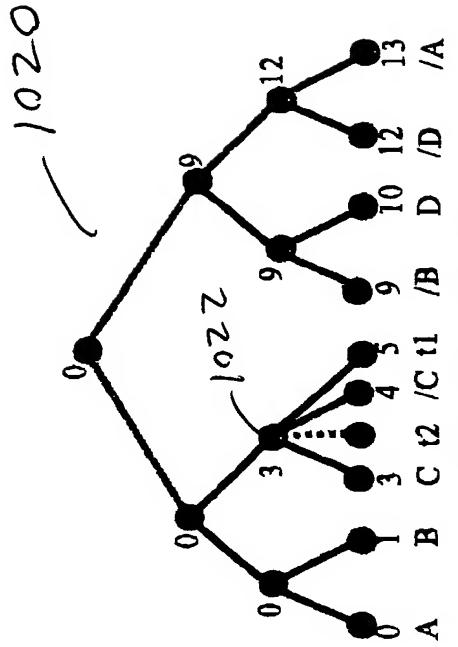


FIG. 10 B
Label tree (f=4,s=2)
(before insertion)

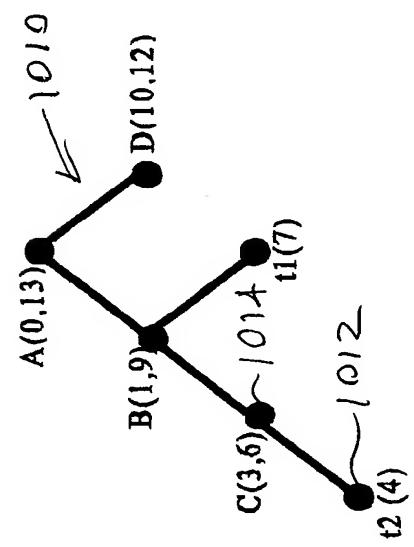


FIG. 10 C
XML tree (after insertion)

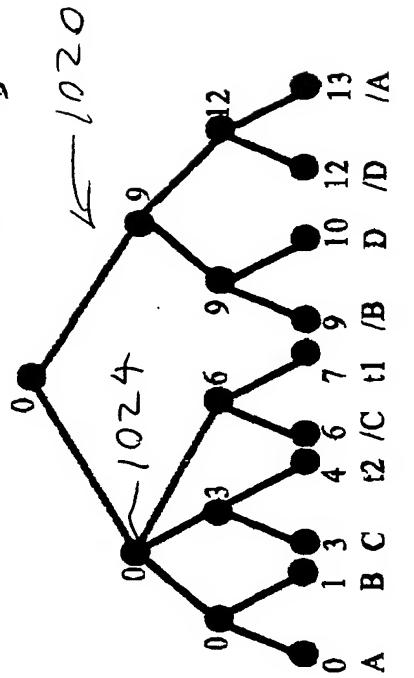
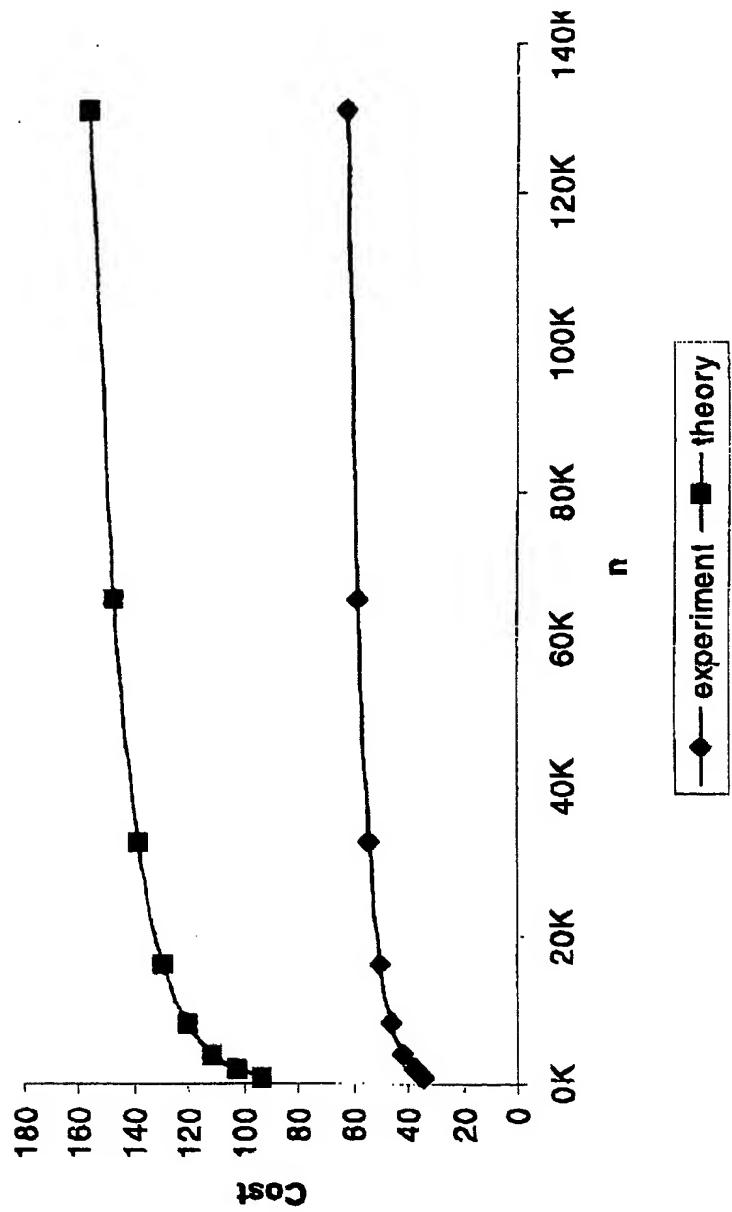


FIG. 10 B
Label tree (f=4,s=2)
(after insertion)



FIG. 10 D
Label tree (f=4,s=2)
(before insertion)

Amortized cost upper bound
($f=4, s=2$)



$f=16, 11$

Amortized cost by varing f
(n=2¹⁵, s=4)

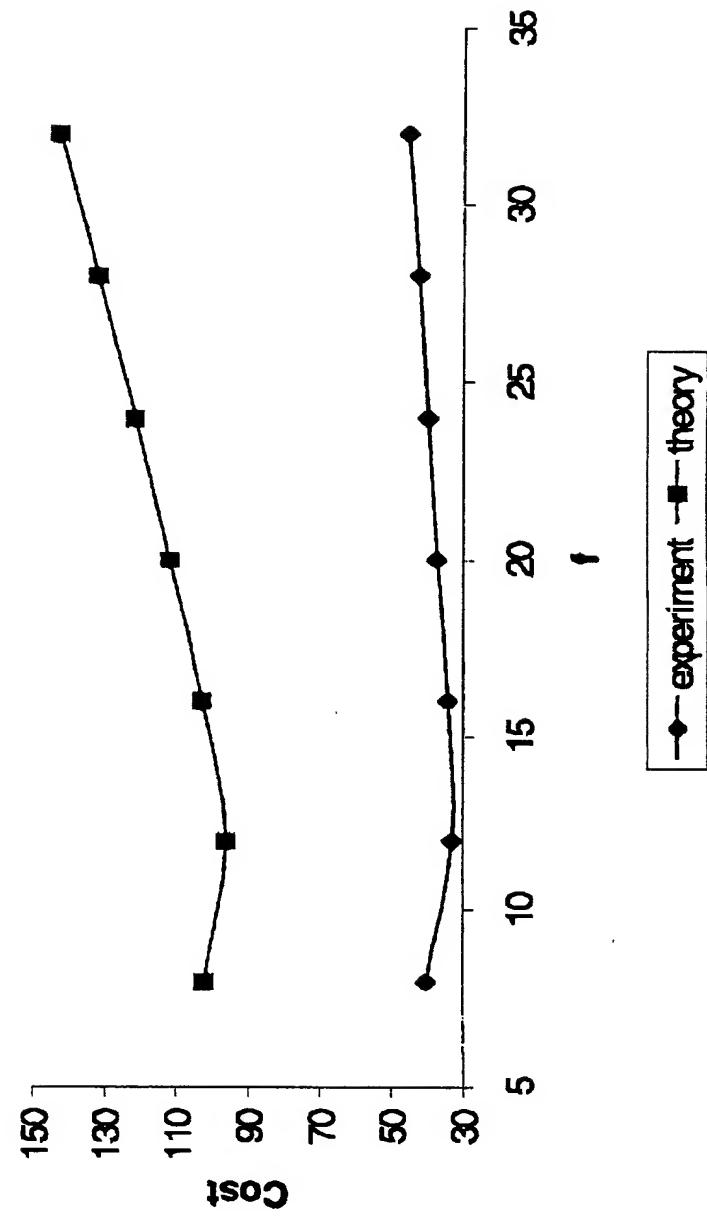


FIG. 12

Amortized cost by varying s
($n=2^{15}$, $f=36$)

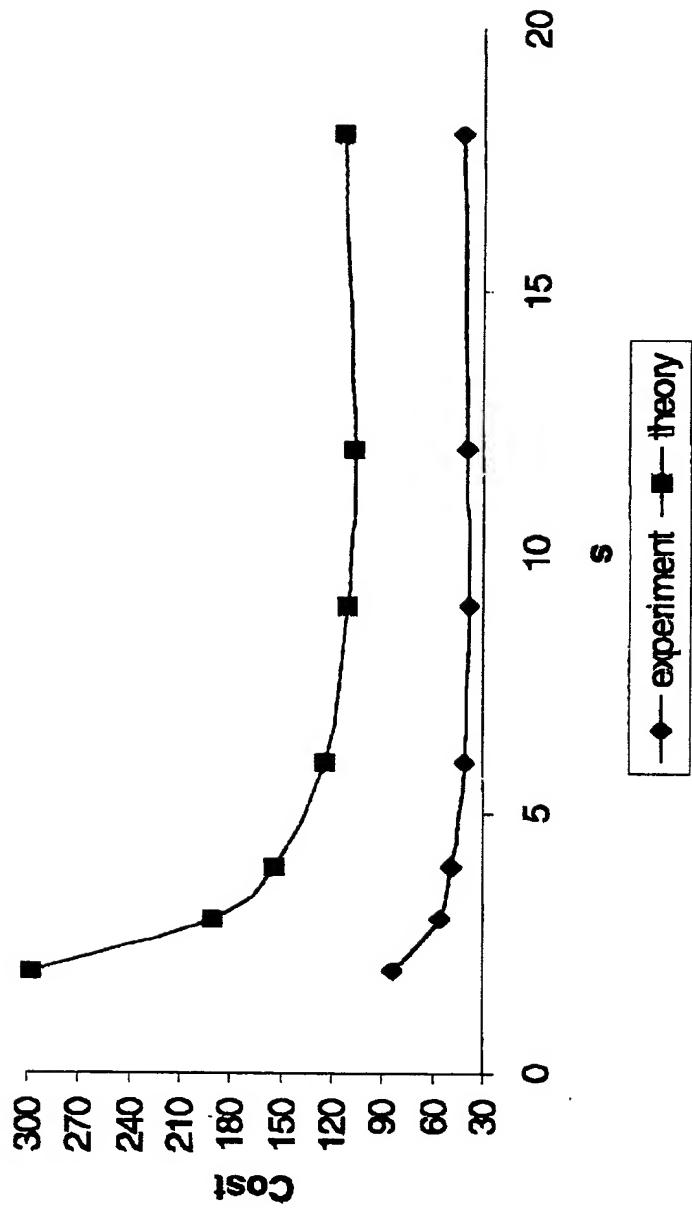


FIG. 13

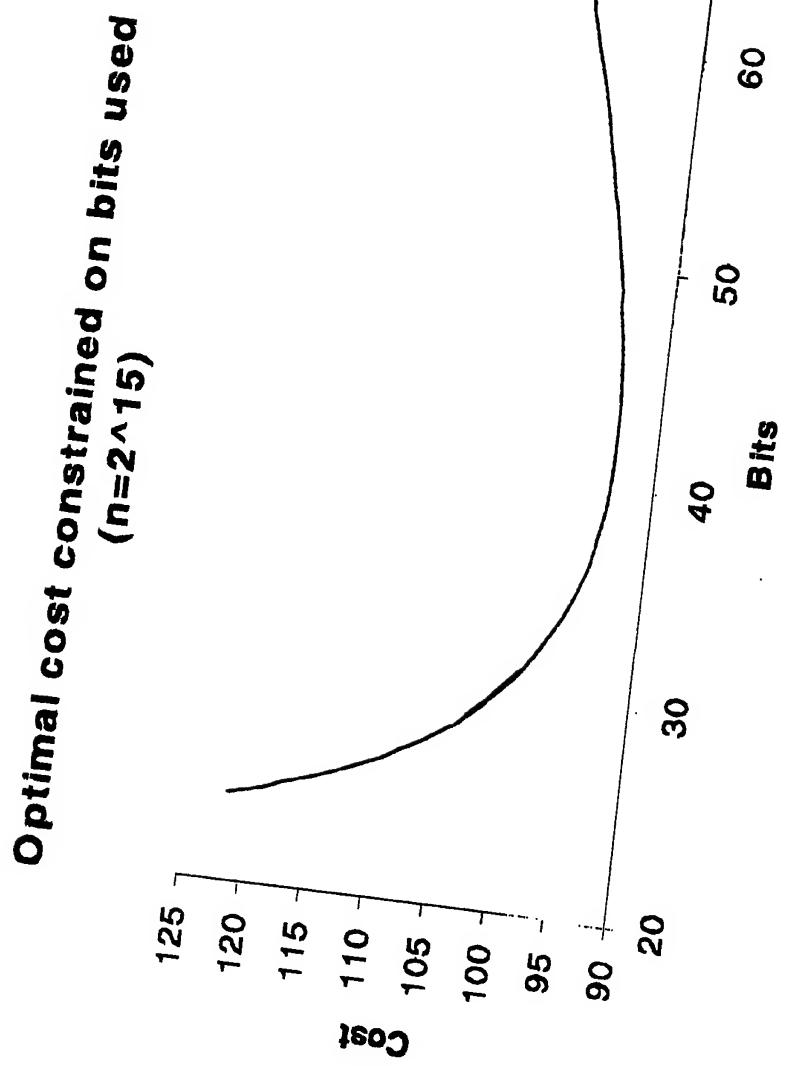


FIG. 14